

THE NIGERIAN RICE ECONOMY IN A COMPETITIVE WORLD:  
CONSTRAINTS, OPPORTUNITIES AND STRATEGIC CHOICES

## **Report of the Final Technical Workshop**

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<sup>2</sup> The workshop is part of an USAID-funded project and implemented by WARDA. The views expressed in this report are those of the individual project scientists and do not necessarily reflect the views of USAID or WARDA.

## Table of contents

1	Workshop background and objectives.....	1
1.1	Strategy formulation for the sustainable development of the Nigerian rice sector ....	1
1.2	Workshop objectives .....	2
1.2.1	Participants .....	2
1.2.2	Workshop objectives & outputs .....	2
1.2.3	Workshop agenda .....	2
2	Communications .....	3
2.1	Paper presentations .....	3
2.1.1	Nigeria’s Rice Policy And Development: A Review (Akpokodje et al., 2003).	3
2.1.2	Rice producers survey (Erenstein et al, 2003).....	3
2.1.3	Irrigated rice study (Kebbeh et al, 2003).....	6
2.1.4	Rice processing survey (Lançon et al, 2003a).....	7
2.1.5	Imported rice consumer survey (Lançon et al, 2003b).....	8
2.1.6	Price integration study (Akande & Akpokodje, 2003).....	9
2.2	Main points of the plenary discussion .....	10
3	Towards a strategic plan .....	14
3.1	Methodology.....	14
3.2	Outcome of consultation process.....	14
4	In conclusion.....	18

# 1 Workshop background and objectives

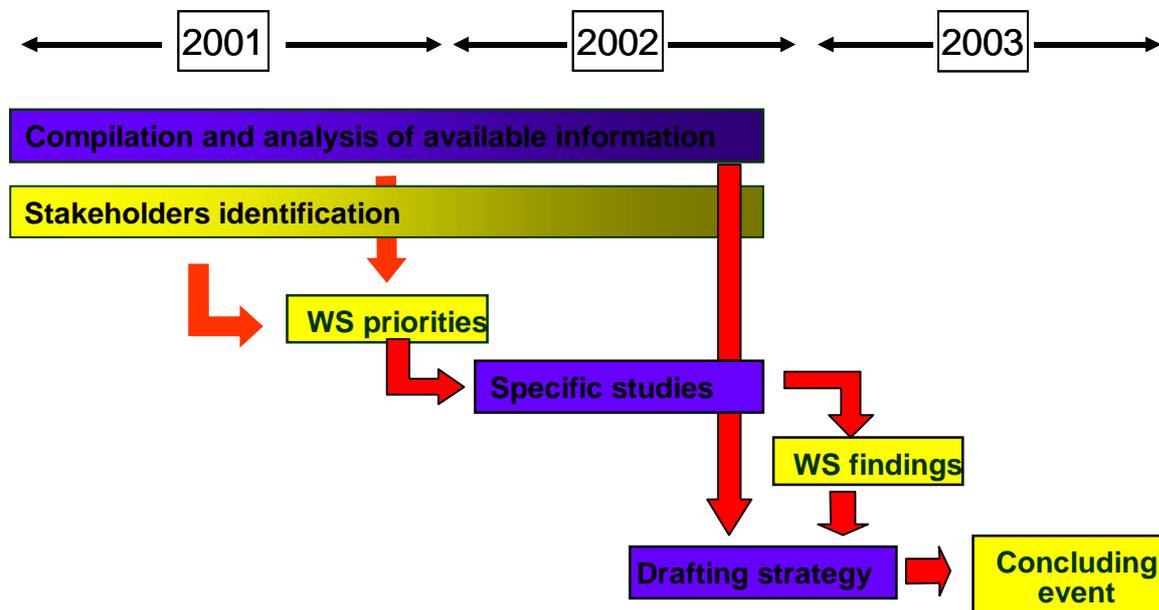
## 1.1 Strategy formulation for the sustainable development of the Nigerian rice sector

The workshop was held within the frame of the project entitled “*The Nigerian Rice Economy in a Competitive World: constraints, opportunities and strategic choices.*” The aim of the project is to contribute to the formulation of a sound strategy for the development of the Nigerian rice sector. The project is build around two components:

- An up to date analysis of the evolution of the various components of the rice sector, from the production to the consumption side, based on literature review, expert consultation and primary data collection.
- The set up of a policy dialogue to generate a shared vision of rice development issues in Nigeria and to formulate a rice development strategy that takes into consideration the concerns of the various stakeholders.

This workshop is the second workshop envisaged by the project. The first workshop was a stakeholder consultation organized to derive priority areas for further research needed in order to develop the strategic plan. This second workshop was a technical workshop to review the results of the additional research with selected stakeholders and to finalize the strategic plan. The final strategic plan will subsequently be presented to an audience of decision makers and donors at the end of the project in a concluding event in Abuja (Figure 1).

**Figure 1: Schematic sequence of the project implementation process**



## **1.2 Workshop objectives**

### ***1.2.1 Participants***

The workshop gathered 52 members representative of the large diversity of agents and institutions involved in the Nigerian rice economy and its development (Annex 1). Participants included the chairman of the Rice Farmer Association of Nigeria, heads of local rice grower associations, rice milling business, rice seed business, ADPs staff, economists and scientists, Central Bank of Nigeria, Nigerian Institute for Social and Economic Research, National Cereal Research Institute. The workshop was also attended by US-AID officials and consultants of the International Finance Corporation assessing the potential for investment in the Nigerian rice sector. Due to unforeseen obligations, only a limited number of officials of the Ministry of Agriculture were able to attend the workshop.

### ***1.2.2 Workshop objectives & outputs***

The workshop aimed at continuing a dialogue among stakeholders to generate a shared vision for the development of the Nigerian rice economy. More specifically the workshop aimed:

- To gather selected stakeholders in the Nigerian rice economy;
- To review and synthesize project studies;
- To review and finalize a strategy to revitalize the Nigerian rice sector.

Within an overall contribution towards a better targeted and more successful revitalization of rice sector, the workshop was envisaged to achieve the following outputs:

- Stakeholder dialogue.
- Shared & better understanding of rice economy amongst stakeholders.
- Input into finalization project study reports.
- Input into finalization strategic plan.

### ***1.2.3 Workshop agenda***

The workshop lasted for one and half day only (see Annex 2). The short duration specifically took into consideration the time constraints of the stakeholders coming from the private sector.

After an opening ceremony, the first day was devoted to the presentation and review of the various project studies by the team of WARDA and NISER scientists as well as a presentation of the draft strategic plan. The second day was devoted to a detailed discussion of the draft strategic plan. To facilitate the discussion and exchanges of views the workshop made use of two working group sessions.

## 2 Communications

In his welcome address, the Director General of NISER, Dr Olu Ajakaiye, expressed his gratitude to US-AID for its financial support to the project and to WARDA for having initiated this collaboration with NISER. He emphasized the importance of the rice consumption growth in Nigeria and the consequent importance of the rice sector on the government political agenda. He stressed the multiple implications of rice sector development on the balance of payment and the generation of income and employment in rural areas. Giving a donor perspective, the US-AID representative, Mr Tom Park, highlighted the need for the benefit of new agricultural technologies to reach farmers. He also reiterated the critical role of agricultural development for the Nigerian economy and for the enhancement of the well-being of millions of Nigerian households. In his opening address the Director general of Warda, Dr Kanayo Nwanze, also reiterated the central role played by agricultural development for economic growth. He said that over dependence on imported rice in Africa revolves around local rice production efficiency, quality and market issues. He therefore urged the rice sector stakeholders present at the workshop to proffer solutions to these other problems and thereby ensure adequate steps are taking towards contributing to Nigerian food security.

### 2.1 Paper presentations

A total of 6 technical papers were presented and a copy of the accompanying technical reports distributed (Annex 3). Here only the main conclusions from each study are reproduced.

#### **2.1.1 *Nigeria's Rice Policy And Development: A Review (Akpokodje et al., 2003)***

The review assessed the major trends of the rice economy on the supply and demand side based on state level data. It subsequently presented the different type of rice based systems encountered in Nigeria and the most recent secondary data on their respective profitability. It is worth noting that in most of the references identified, lowland rainfed rice systems have a higher profitability than upland rice. A subsequent section dealt with the processing and marketing of rice. The review highlighted the limited information available on this segment of the food chain compared to the production aspects. The last part of the paper reviewed the various sequences of the rice policy implemented in Nigeria since the seventies. The paper concludes by underlining that although a lot of work has been done on rice, this material is not easily accessible whereas it does not properly document how the removal of the rice ban import has affected the Nigerian rice economy.

#### **2.1.2 *Rice producers survey (Erenstein et al, 2003)***

Rice is first and foremost a cash crop for Nigerian rice producers – i.e. it is produced primarily for the market. This marked market orientation reflects that both rice production and rice consumption are non-traditional in much of Nigeria.

The survey has characterized rice producers and rice production systems. Rice producing farm households are primarily small-holders with limited capital resources. They cultivate an average of 8 ha with crops per year – of which 3.3 ha are devoted to rice. Crop farming typically is the main source of household income, but households variously supplement their income with livestock and off-farm sources of income.

Rice is typically the main crop for rice producing households in terms of area allocation and income. Where rice production is established, it is widespread within the village/region and appears relatively stable with a long history. This reflects that rice production is attractive in survey areas, even despite the relatively limited returns and substantial policy changes over the last decades. This also suggests that rice producers may lack alternatives – in terms of remunerative opportunities to generate cash and/or to use their labor and land resources productively. In particular this seems to apply to lowland and remote areas. Still, it needs to be reiterated that the survey only addresses current rice producers. It thereby does not address those that have stopped with rice production. Indeed, in other areas producers may have entered and subsequently left rice production.

The survey has highlighted that returns to rice production are relatively limited. This implies a need to enhance productivity and reduce production costs to enhance competitiveness. Rice production is labor intensive and labor represents the major production cost and cash outlay. Improving labor productivity is primordial and the use of labor-saving technology – e.g. traction and herbicides - offers substantial promise. The market orientation of rice production inherently enables external input use. Indeed, rice producers are already willing to invest to some degree in the use of productivity enhancing technologies– even without input subsidies and in an uncertain policy environment. The surveyed rice producers variously used fertilizer (62%), herbicides (52%) and traction for land preparation (27%). External input use not only allows to increase productivity, but also can help ensure the sustainability of rice production systems.

Despite substantial use of external inputs as fertilizer and herbicides, input use efficiency is low. Indeed, rice yields are relatively low - 1.9 tons per ha - and there is substantial scope for increasing yields and enhancing input use efficiency. An underutilized venue to enhance productivity is the use of improved varieties. Indeed, numerous rice producers still rely on traditional varieties (e.g. also see Longtau, 2003) – with characteristic low yields, limited response to fertilizer and long growing cycles. Improved varieties currently in use by some farmers already show that with the present varietal basket substantial improvements are possible. The addition of new improved genetic material to the varietal basket should allow for further substantial increases in rice productivity (Osiname, 2003) – even when maintaining current input use levels. The upland rice producers in Ekiti state are a case in point – achieving acceptable yields by using improved varieties even without fertilizer.

Location variously affects the returns to rice production – in terms of production costs, produce value and productivity differentials. Production costs are to a large extent determined by technology use and resource costs. Produce value is to a large extent determined by access to rice consumer centers. Productivity differentials reflect technology use and ecology. Indeed, significant variation in land productivity (yield) exist over the surveyed locations.

The ecology of the rice field influences the returns to rice production. Lowlands without water control were the most common rice production ecology amongst the surveyed fields – but comprise substantial variation in terms of water-logging, flooding levels and topography. However, relatively low yields and about average production costs imply meager and variable returns to rice production. Irrigated fields - i.e. lowland fields with water control -performed substantially better and achieved attractive economic returns. Still, it should be recalled that the irrigated sub-sample is relatively small and coming from Niger state only – a consequence of the sampling frame used. A complementary study specifically looks into the potential of

irrigated rice across several schemes in different states (Kebbeh et al, 2003). It should also be remembered that water control typically implies substantial investments. The returns to irrigated rice production presented here are the private returns – which do not take into account previous irrigation investments (a public sunk cost) whereas the producer only pays a nominal water charge. The social returns to irrigated rice production are likely to be less attractive – particularly when new infrastructure needs to be developed. Priority should therefore be given to enhancing the efficient utilization of existing operational irrigation schemes. Furthermore, private and small-scale improvements in water control at the field level (e.g. use of bunding) may be worth exploring as venues to enhance land productivity.

A variety of rice production systems and technological levels co-exist. Although all would benefit from reduced production costs and enhanced productivity, no single solution is likely to fit all. Indeed, rice producers have already variously adapted to their varying circumstances. For instance, although only limited levels of mechanization were found, these are especially common for land preparation in the floodplains of remote Taraba state. These rice producers thereby seemed to rely on traction – primarily tractors, with limited animal traction – to cultivate substantial rice areas despite labor constraints and to ensure the timeliness of establishment. Subsequent crop management was relatively extensive and yields low. Other rice producers follow other strategies in terms of labor and input use. In this regard different productivity enhancing strategies are needed depending on the circumstances.

Despite substantial external input use, access to external inputs can be problematic. Many rice producing households also face working capital problems – i.e. the ability and cost of financing production costs. At the same time transport and accessibility problems are widespread. For rice production to become more attractive and competitive, an enabling environment is needed – whereby access to markets (both input and output) is a key component. Physical access to markets is thereby a necessary but insufficient condition for competitive rice production. There is also a need to reduce transaction costs in general. Standardization of units and quality grades and access to market information (price information) have a significant role to play. Market information is likely to increase the bargaining power of producers, particularly in remote areas. Bargaining power of rice producers may be further enhanced by rice producer organization – which would also facilitate access to markets and facilitate information supply/distribution. Finally, an enabling environment also implies a stable and consistent policy environment – something which has not been evident for rice producers in Nigeria (Akpokodje et al., 2001).

The present study mainly emphasized rice producers and rice production. It is acknowledged that rice production competes with other crops and activities for scarce household resources. In part this is reflected in the assumed opportunity costs. Still, a better understanding of all these competing activities would help to better interpret the findings of this study. However, the diversity of rice production systems and corresponding implications for production costs was already daunting for one single study – let alone if we had to simultaneously capture all other activities which vary over the surveyed states. The outcome of this survey hopefully can serve as basis for a better understanding of rice production and for subsequent complementary studies to compare rice to other crops and/or activities.

Locally produced rice competes with other products on the food market. First, it competes with other locally produced foodstuffs – such as other cereals and roots & tubers. However, the persistent gradual increase in rice consumption levels in Nigeria has highlighted that rice

has become a structural component in the Nigerian diet. Indeed, changes in relative commodity prices have slowed but not reversed the increase – suggesting that this type of competition is relatively limited. More stringent for local rice is the competition with imported rice. Indeed, the price of imported rice puts a cap on the price of local produce – basically a function of world market price, import duties, transport costs and quality premium. Still, local rice is an imperfect substitute for imported rice – as imported rice is widely perceived to be of better quality and therefore commanding a higher price. The crop budgets reflect that at the prevalent prices at the time of the survey and with the assumed opportunity costs, half the rice producers were price competitive. The recent increase in the import duty on imported rice should imply more favorable producer prices for rice – which in turn should imply more favorable returns to rice production, *ceteris paribus*.

Import duties are one way to make local rice production more economically attractive. However, import duties should be seen as a temporary measure and more structural improvements in the rice sector are needed to make the rice producers competitive with imported rice. This basically requires a two-pronged approach. First, substantial productivity increases in rice production are needed to lower production costs. Second, the persistent quality problems of Nigerian rice need to be addressed. Indeed, the quality differential between local and imported rice implies a price differential that can only be reduced if the quality of local rice is drastically improved. This requires integrated quality management along the entire commodity chain – from rice production, through processing and marketing. Indeed, different steps potentially influence the quality of the end product, including production, harvest, threshing, parboiling, drying, milling, storage and marketing. The survey has shown that different actors involved in each step – implying the need to include all stakeholders in quality management. In the end, local rice can only become competitive with imported rice if it can compete both in terms of price and quality.

### **2.1.3 Irrigated rice study (Kebbeh et al, 2003)**

The sector is characterized by a wide array of irrigated rice-based production systems in different parts of the country, from systems with complete water control found in the Sahel and Sudan Savannah zones in Northern Nigeria to systems with partial water control found in some parts of the savannah and equatorial zones in the Middle Belt and Southeastern parts of the country. Irrigation schemes in the north of the country are generally much larger than those in other regions. In addition to problems with maintenance and operation of schemes, there is widespread underutilization of irrigation infrastructure at all schemes visited in the north. This observation has important implications for increasing irrigated rice productivity and production in the country. Significant production gains can be achieved by better utilization of existing infrastructure. Irrigation development policy should focus on improving the performance and efficiency of existing irrigation infrastructure, rather than investment in new schemes.

There is wide diversity of land and resource endowment, ranging from small farmers with access to less than one hectare of irrigated rice land to large-scale producers cultivating more than one hundred hectares. There is a strong relationship between extent of water control and levels of investment in external inputs like fertilizers and herbicides. In general, the input rates or dosages are much higher in systems with greater water control. Although farm level decision-making continues to be dominated by men, female farmers continue to play important roles in the irrigated rice sector. Women are actively involved in various production and post harvest operations.

In general, yields are much higher in the Sahel and Sudan savanna zones than in irrigated rice systems in the other agro-ecological zones in the country. In most sites however, there have been significant declines in irrigated rice yields over the last decade. Actual yields are also much lower than potential yields. Yields obtained by farmers in Northern Nigeria are much lower than those obtained by farmers in similar environments in the Sahel. Yields and profits obtained by small-scale farmers in the study sample are generally higher than those obtained by medium scale and large scale farmers. Similarly, benefit:cost ratios are higher among small-scale producers.

Research and extension support for irrigated rice-based systems in the Sahel and Sudan savannah zones are highly inadequate. The scope of adaptive on-farm research and development is very limited. Farmers make little, if any, contribution to the debate on the major constraints and priority research and extension themes. Current mechanisms of extension support for irrigated rice production are rigid and emphasize a top-to-bottom extension process. In general, extension staff is not adequately trained and lack access to relevant training materials and other resources.

Major constraints identified in the study sites are:

- High input costs and limited access to farm credit.
- Use of inappropriate crop and resource management practices, due to general lack of knowledge of improved technologies.
- Limited access to improved varieties (duration and yield), and persistent use of poor quality seed.
- Lack of appropriate small farm machinery for harvest and post-harvest operations.
- Inadequate Research and Extension Support, especially in the Sahel and Sudan Savannah zones.
- Localized problems of soil degradation.

Recommendations for research and development interventions:

- Development and adaptation of small farm machinery for harvest and post harvest operations (Thresher-cleaner, reaper-harvester).
- On-farm evaluation and adaptation of improved irrigated rice varieties.
- Site specific adaptation of improved integrated crop management technologies.
- Limited number of key sites (one or two) for participatory on-farm research and development (R&D) activities.

#### **2.1.4 Rice processing survey (Lançon et al, 2003a)**

Rice milling in Nigeria is a 'cottage industry' mainly carried out by small-scale workshops with an average hourly capacity of 200 kg of milled rice. The majority of the millers do not trade produce – i.e. purchase paddy and sell rice – but only process paddy on a fee basis for others (producers, traders or consumers). The limited number of millers involved in paddy and rice trade is due to the high risks attached to the marketing of both products, which may result in financial losses. Furthermore, beyond market instability, miller-traders who purchase paddy also have to bear the high costs of parboiling operations which represent more than half of their total processing costs. The cost of fuel wood is particularly high for workshops located in peri-urban areas. On the other hand, milling operations carried out for a fee by millers-only are financially viable under the current average level of milling fees (2 to 3 Naira per kg of rice) which represent a marginal amount (below 5%) of the rice market price at the

retailing spot. In this system, through which 78% of the total production is processed, paddy is parboiled beforehand by the producers or a specialized agent generally located in rural areas benefiting from lower opportunity costs for getting the required inputs (fuel wood and water).

The dissociation of the various processing tasks among different operators confers more flexibility to the post-harvest segment of the rice commodity chain and therefore increases its resilience under very unstable and risky market conditions. However, this system does not provide the awaited mechanism to increase the quality of the milled rice, as millers-only do not have any incentives to improve the quality of their output.

Along the same line, for miller-traders the survey also indicates that, under the current level of price for imported rice, it is worth to invest in improved technology to enhance the appearance and cleanliness of the local rice to match imported rice standards. Investment in improved technologies is actually limited on the one hand by constraints in accessing the capital needed (credit) and availability of the equipment, but on the other hand also by a rice market that does not convey a reward to quality from the consumers to the miller and further up-stream to the producer.

The survey shows that technical changes at the milling stage would not by itself solve the issue of the Nigerian rice quality. The investment in new equipment like destoners is necessary but it would have a real impact only if the quality issue is tackled holistically at the various stage of the commodity chain to establish an enabling marketing environment through the emergence of a shared concern among stakeholders.

### **2.1.5 Imported rice consumer survey (Lançon et al, 2003b)**

This rapid appraisal of imported rice customers' preferences confirmed that imported rice cleanliness is the overwhelming factor explaining the expansion of imported rice consumption in Nigeria at the cost of local rice market development and in spite of an increasing tariff barrier. Along the same lines, the lower price of local rice remains the major incentive for imported rice customers to also maintain their purchase of Nigerian rice. However, when price and grain appearance are put aside, customers interviewed acknowledge the attractiveness of Nigerian rice organoleptic properties, an asset that cannot be properly exploited in the current situation due to the poor performance of the rice commodity chain in terms of quality management.

Beyond, customers' preferences, the survey also indicates that local rice marketing suffered from higher transaction costs in urban market induced by a scattered and irregular supply of product. These constraints tend to turn rice retailers away from the local rice marketing chain in favor of the imported rice channels which offers extended facilities for managing their business (credit).

The prevalence of constraints related to transaction management indicates that if quality is a key word for the Nigerian rice sub-sector recovery this is necessary but not sufficient condition. The exploitation of the "organoleptic" potential of Nigerian varieties would also require a reduction of transaction costs which partly depend on the marketing of a larger volume, and hence an upward trends in production.

### **2.1.6 Price integration study (Akande & Akpokodje, 2003)**

A number of findings emanate from this study. First, the retail prices of local rice generally had an upward trend during the period of coverage. Retail prices appear to be rising faster in Lagos than in any another center. Indications are that prices of local rice rose more in Lagos (with a slope of 0.2253) than in Abuja and Enugu with slopes of 0.2044 and 0.2022 respectively.

Second, the high average growth rates of retail prices during the period of study appear to portend some great danger as this has the implication of eroding the purchasing power of rice consumers. This is particularly grievous when cognizance is taken of the fact that wages remain constant over a considerable period of time and inflation has been rising unabated. But it should be noted that in more recent years (i.e., 2000-2001), the growth rates have been negative. If prices remain at these levels, then the welfare of rice consumers may be secured. But this would be at the expense of rice producers who are experiencing little or no increase in the prices of their products. This could serve as a disincentive to further investment in rice farming activities. The implication of this is a reduced level of local rice output. This could trigger increases in the prices of local rice, and may engender further increase in rice importation, thereby depleting further the foreign exchange earnings of the country. It should be stressed that the negative growth in rice prices in more recent years is a reflection of deliberate government policies geared towards securing cheap food items for urban dwellers.

Third, price variability levels are generally and relatively low, which on the average is less than 30%, with variability higher in the prices of local rice than in imported rice. However, the difference between this variability does not appear to be very huge. The relatively low level of price variability in both local and imported rice implies that rice consumers can effectively plan their expenditure pattern on price with a fairly high degree of expectation that prices are not likely to substantially deviate from their expectations. On the part of policy, this makes for effective planning.

Fourth, retail prices in one market tend to be correlated with similar prices in other market. In addition, retail prices of a category of rice seem to correlate with the retail prices of another category of rice in the same center. This implies that movements in retail prices irrespective of their centers, tend to move with changes in retail prices in other centers. The implication of this is that policy makers need to take into cognizance the possible effects that policy measures put in place, probably to effect prices in a particular center or on a particular category of rice, are likely to have on the prices of rice in other centers.

Fifth, the markets for local rice are generally integrated. This implies that excluding transportation and risk factors, retail prices of local rice in one center do not substantially differ from prices of the same commodity in other centers.

Sixth, markets for imported rice are generally characterized by imperfections. This could be due to the poor transportation network between the different imported rice marketing centers. Price integration was only discovered between centers that are close to the source of imported rice. Perhaps, most of these other markets are serving as secondary markets, hence the non-integration of those markets.

Seventh, imported and local rice markets generally do not interact in the same center. It appears that the markets are high segregated, implying that they function independently.

Two major recommendations emanate from the findings of this study. These are designed towards an effective functioning of the rice markets in Nigeria.

First, there is the need for the development of a comprehensive and public price information system. The dissemination of price information may contribute to developing a common base of information for all economic agents involved in food crop chains. This is an indispensable tool for policy makers to efficiently monitor marketing issues which are vital in the assessment of the effects of specific agricultural policies.

Second, there is the need for an urgent rehabilitation of the feeder roads in the country. Such an enhancement to the transportation infrastructure is a necessary condition to ensure a better flow of price information and rice products and thereby further reduce transaction costs.

Conclusively, rice has assumed a prominent role in the consumption patterns of the majority of Nigerians. This has aroused the interest of government in the development of the rice economy of the country. However, prices play a prominent role in the allocation of resources in the economy at large, but more specifically in the rice economy. Local rice markets are generally integrated though there is still room for improvements. Imported rice markets are generally not integrated. The dearth of information on prices is highlighted in the study as gaps are noted in the data series employed.

## **2.2 Main points of the plenary discussion**

Overall the attempt to review the whole rice sector was highly commended and it was recommended to circulate the information and summary results widely. During the plenary discussion of the presentations, several pertinent issues were raised.

### **Review paper**

The issue of rice sector competitiveness and comparative advantage are crucial although they should be taken in a diagnostic perspective rather than in prescriptive one. The quality of the information and data available also affect the capacity of decision makers to draw out appropriate and relevant policies. It was underlined that past policies might have been well designed but adequate implementation typically proved problematic. In particular they failed in taking the private sector seriously and did not provide an enabling environment for private sector development in the rice sector.

### **Production papers**

It was underlined that there are few genuinely local/traditional rice varieties and that most of the varieties were actually improved varieties introduced in farmers' fields during the last twenty years. However they are perceived as traditional/local by farmers in view of their prolonged use and limited dissemination of new improved varieties in recent years. The problem of limited dissemination of new improved varieties was underlined and linked to problematic access to improved varieties and improved seed. Weak research – extension – farmer linkages were a major cause of the limited dissemination of new planting material and practices, and in turn attributed to the lack of steady funding for research and extension.

The need to take into account differences between rice ecologies was acknowledged, as well as the general lack of competitiveness vis-à-vis imported rice for most of the rice production

systems. Only systems with reasonable yields, typically lowlands with some degree of water control, may be able to compete with imported rice if tariffs were to be removed. In addition, tradition of rice consumption/production may allow some systems to endure despite low profitability (eg Nupe in Niger). Differences in production costs were related to underlying technology use and labor-saving technology in particular. The small yield differences between upland and lowland rice based systems were noted, which might be attributed to the limited control over water in most lowlands and the rather extensive systems used in the floodplains. It was reiterated that better water control opens the scope for intensification and better management.

The limited competitiveness calls for rapid dissemination of improved technology, including post harvest handling. High transaction costs for transporting rice within the country also result in some rice being shipped to neighboring countries instead (Cameroon, Niger). The perpetual problem of widespread bird damage and need for bird scaring was also noted. In the case of bird damage it was clarified that there is no easy solution, but that bird damage tends to be diffused in areas with significant rice areas and that synchronization of planting may also help to diffuse damage. Farmers in upland areas already tend to hang unrolled cassette tapes in their fields to scare birds. Iron toxicity was linked to water control whereas RYMV was reportedly spreading in Niger state. The need to consider alternative fertility management technologies and sustainability issues was also noted.

The relative underperformance of irrigated rice in Nigeria within the context of West Africa generated some discussion. It was amongst others related to the management of inputs, access to new improved varieties and problematic operation and maintenance of irrigation schemes. It was acknowledged that the emphasis indeed should be on irrigation scheme rehabilitation, but that due to vested interests preference is often given to new irrigation systems. The need for more farmer involvement in irrigation schemes was highlighted, including their involvement in scheme design. The relative efficiency of small-scale and large-scale irrigated schemes was discussed. The limited profitability of one large scheme in the north east (south Chad) was linked to the cost of pumping, as well as need for heavy land preparation equipment. It was reminded that water management is not only an issue at scheme level but also at basin level and that it requires an appropriate management of dam reservoir discharge – particularly with respect to flood timing and levels in the floodplains. The issue of land tenure was raised and it was noted that tenure issues might be a problem in irrigated systems where rice producers hesitate to invest into land and canal maintenance due to tenure insecurity.

### **Processing, imported rice and price integration study papers**

Quality should be handled in an holistic way starting from the farm and the quality (homogeneity) of the paddy. When farmers or traders mix several varieties it is difficult to get a rice of high quality.

It was highlighted that acceptability or availability of modern processing technology is not the only issue. For instance, in Abakaliki a large overcapacity of destoners already exists. Destoning in the current setting is not attractive: the service has a cost, you lose weight and do not get an adequate quality premium. Larger mills with modern sophisticated technology (e.g. rubber roller, destoner, collar sorter) already exist – but are going or have gone out of business. Some attribute this to mismanagement, particularly where the public sector was involved. However, a major cause is the limited volume processed and the underlying

logistical problems. This also adversely affects large processing centers such as Abakaliki - which assembles many small mills - which is now running at only a fraction of its overall milling capacity. Industrial mills hold little promise as they have proved problematic to operate and typically have failed, also in other countries in the region. An increase in local rice production would be advantageous for the performance of processors, as the procurement of sufficient paddy is problematic. Also, although improved technology is available and underutilized in the current setting, the majority of processors still rely on old technology and would benefit from better and more efficient processing methods (parboiling, milling). The impurities in local rice were also attributed to the lack of enforcing quality standards.

Past government action and inaction has dominated the agricultural sector to the detriment of agricultural productivity. The increasing role for the private sector to take the lead was acknowledged, and requires an enabling environment for the private sector.

The discussion signaled that a major problem was the acceptability to and preferences of the consumer. There was a general attitude problem of Nigerian consumers and traders not liking their own rice – seeing local rice as rice of low quality – and craving for imported rice. To check this demand for imported rice and ensure an attitude shift, calls for awareness campaigns, information dissemination and advertising of local rice. Still it should be acknowledged that even under the current setting there still is a demand for local rice - mainly because it is cheaper. However, it was signaled that the rice market is variously stratified, and that each market segment had its own appeal. For instance, local rice of high quality can be found in certain markets like Lagos at high prices comparable to imported rice (e.g. for Tuwo). It was also signaled that we should look at the strengths of local rice, particularly its tastefulness. However, some of the best tasting local rice's are difficult to procure – typically due to a low supply, related to these being traditional varieties with low yields.

It was also clarified that the foreign rice is not over-processed but over-stored – sometimes with a shelf life of up to 24 months in the country of origin. If local rice would be similarly stored, it would achieve a similar taste and swelling capacity. However, the feasibility and cost of long-term storage of local rice are not evident. It was also reiterated that imported rice is being dumped at low prices and typically well-packaged – undermining the competitiveness of local rice and requiring an enabling environment for the local rice sector to develop. In the end, the competitiveness of local rice would benefit from increased availability, better packaging and enhanced cleanliness. This calls for an integrated holistic approach of the entire commodity chain.

Finally, there is a need to carefully balance the interests of producers and consumers. Low rice prices are a disincentive for local producers. High rice prices erode consumer purchasing power and undermine food security – the more now rice represents an increasing share of the food basket and rice has increasingly become an ordinary good instead of a luxury good.

### **Overall plenary discussion**

The plenary discussions highlighted that there is an increasing acknowledgement amongst the stakeholders present of a number of given facts and issues. There is an evident need to increase the competitiveness of local rice production, whereas the potential of using trade policy is limited. Farmers need access to inputs, capital/credit and new technology. But the government should not provide inputs and capital itself - instead, it should provide an enabling environment for the private sector to provide these. A reduction of transaction costs

would be helpful in this respect. There is indeed an increasing role for the private sector, within a market-oriented, private-sector led approach, including the empowerment of farmers. There is also a need for consistency and endurance in policy formulation and subsequent implementation. There are inherent problems with large scale-interventions such as industrial mills and large irrigation schemes – and small-scale interventions seem more viable. There are also severe resource constraints within the public sector – including research and extension. There is a need to take into account the needs of the consumer – and the consequent role of quality. There is a need to boost the image of local rice. Finally, there is typically too little interaction amongst all stakeholders (including farmers) and a need for more information sharing and coordination.

A shared understanding amongst stakeholders of the constraints and challenges facing the development of the rice subsector is indeed essential for progress. This is an important building stone for a comprehensive commodity chain approach and a coordinated development effort. However, it was also repeatedly underlined that we need to go further to prevent that this remains policy talk only. Participants were therefore requested to make specific recommendations and practical suggestions where appropriate. Indeed, each stakeholder has a role to play and should assess how best to contribute to a strategy to revitalize the rice subsector.

### **3 Towards a strategic plan**

#### **3.1 Methodology**

In the months preceding the workshop, the project team had developed a draft strategic plan – or strategic framework – for the revitalization of the Nigerian rice sector, based on the outcome of the various project studies and interaction with selected stakeholders. The draft strategic plan was presented in plenary and a copy of the draft plan distributed during the first day. The subsequent day, the participants were requested to discuss the draft strategic plan. To facilitate this the workshop participants were divided into two separate groups, assuring an adequate partitioning of the various stakeholders across groups. Each group was guided by a facilitator and given the same terms of reference. Specifically, each group was requested:

1. Endorse & discuss the underlying principles of strategic plan. In particular, that the strategy should (i) be demand driven – being a commercial crop, the need to consider consumer demand; (ii) focus on rice specific issues; and (iii) should follow a phased prioritization (in terms of timeframe and location/system).
2. Review content of the draft strategic plan and suggest changes/additions/etc, with a particular focus on the strategic priorities and the implementation strategy proposed.
3. Brainstorm on potential activities for an action plan within the context of the strategic plan.
4. Develop at least 2 of the proposed activities, providing more detail in terms of the activity, its focus (thematic area and link to strategic plan priorities), objective/-purpose, term (short vs. long) for implementation, stakeholders (beneficiaries & partners implementation) and expected impact.

Each group subsequently presented their findings in a plenary session to compare results and achieve consensus on the strategic plan/framework.

#### **3.2 Outcome of consultation process**

##### **Underlying principles**

Both working groups discussed the underlying principles and came to an endorsement that the strategy should (i) be demand driven and (ii) focus on rice specific issues. The working groups underlined the need for a holistic approach combining both quality management and productivity enhancement simultaneously. The groups also endorsed that in terms of site/system specificness potential should prevail over purely socio-economic considerations.

Within the discussion of the underlying principles a number of other issues were discussed. It was suggested that ‘demand driven’ should not limit itself to quality issues, but also to the increasing demand for rice per se. Also there is a specific demand for cheap rice - irrespective of quality. The limitations of rice trade policy were reiterated – particularly the (im)possibilities of keeping out imported rice in view of the WTO. Furthermore, taxes will likely be harmonized within region – implying current taxes on imported rice may need to come down in the future. A suggestion to import paddy instead of rice to boost the utilization of local processing capacity was rejected.

### **Strategic plan issues**

The draft strategic plan was discussed at length and suggestions made for its improvement. Certain suggestions, such as the need to mention the ultimate goal of achieving self-sufficiency in rice, were incorporated as such into the strategy and will not all be mentioned here.

Both groups suggested to give a more prominent role to the increasing efficiency at the producer level – so as to boost competitiveness of Nigerian rice vis-à-vis Asian rice (eg Thailand) and West African rice (eg Senegal). The need for bulking same varieties and avoid mixing was also strongly endorsed - mixing of varieties being seen as a major factor leading to poor quality of milled rice. One group also highlighted the need to promote better use of byproducts in the downstream sector. It was clarified that improved milling technology (rubber roller) implied less waste and made it easier to separate the various byproducts (bran for feed & oil; husk) – thereby facilitating a better use of each byproduct. Current processing technology implies more waste which is difficult to separate and it was proposed to develop options for use of such byproducts (eg fuel - bricket, manure). It was proposed to subsume by-product use under rice processing efficiency.

### **Proposed activities for action plan**

Each group came up with a list of suggested activities for an action plan to operationalize the strategic framework. The contributions of the two groups have been combined and were grouped under five themes.

#### 1. Enhance policy dialogue

- Establishment of a national stakeholder forum/network
  - o Meets on regular basis
  - o Serves as check and assess progress
  - o Serves as rice network to exchange information
  - o Links all stakeholders – including private sector, farmers, banks, government, consumers.
  - o Potential convening/leading role for RIFAN
- Improve the quality of relations between government and stakeholders, including involvement of rice producers in policy making
- Training and formation of rice stakeholders/farmer groups to participate in policy dialogue

#### 2. Promote Nigerian rice and quality improvement

- Awareness campaign for local rice - advertisement & publicity to promote local rice consumption
- Sensitization and training of farmers on production of quality rice, including need for homogeneity of paddy
- Awareness/sensitization on post-harvest processing by stakeholders
- Standardize paddy grading
- Set acceptable quality standards and enhance and enforce rice quality control

#### 3. Enhance processing technology

- Training on modern processing methods, including appropriate small scale technology and parboiling (with its corresponding gender dimension, as mainly women parboil)

- Develop and launch local brand for Nigerian rice, including good packaging and capacity building of existing processors
  - Provision of small-scale destoners for farmer groups
  - Promote/develop use of rice by-product
4. Increase productivity along commodity chain
- Facilitate farmers' and processors' access to inputs and capital/credit, including the organization of effective groups
  - Provision of marketing info at the start of the season
  - Dissemination improved production technologies, including improved varieties and appropriate labor saving technology (suitable for small scale farmers)
  - Improve seed supply
    - o Enhance homogeneity of paddy by promoting homogeneity of seed at farm level and specific varieties at ecology level
    - o Promote seed renewal practices – i.e. not using produce as seed but acquiring quality seed
    - o Promote use of seed cleaners and sorters
    - o Develop national rice seed network to provide good quality seed, with active involvement of national seed services
  - Development and dissemination of small-scale irrigation technologies – i.e. appropriate water control at field level in lowlands (eg bunding) - as necessary condition for further intensification
  - Development of small-scale post-harvest mechanization (eg mini-harvesters and dryer)
  - Exchange visits within the West Africa region by farmers, for instance to Senegal to assess scope for reducing yield gap
5. Miscellaneous policy activities
- Promote rice farming to boost production of quality Nigerian rice
  - Policy on risk management (gluts, surplus, agricultural insurance)
  - Government should streamline activities, increase consistency in government policy implementation and enhance private sector participation (including the development of guidelines how to)
  - Involvement of River Basin Development Authorities in flood control along major river for improvement of rice production on floodplains

Both groups came up with the same overall priority: the need to enhance policy dialogue (theme 1 above), particularly through the institutionalization of a policy/stakeholder forum/network. The first group also emphasized the need to disseminate improved production technology (theme 4), including improved varieties, appropriate labor saving technology, appropriate lowland water control and seed renewal practices. The second group singled out seed as the priority technology to be disseminated (within theme 4) – with particular emphasis on the need to form a rice seed network. Finally, the first group also underlined the need to promote Nigerian rice in general and improve the quality of Nigerian rice in particular (theme 2). Unfortunately time constraints did allow the groups to elaborate the proposed activities in more detail.

### **Overall plenary discussion**

It was underlined that the agricultural sector is the engine for sustainable economic growth in Nigeria and that rice in particular is a promising opportunity. However, inconsistent policies in the past have not helped to realize this potential.

The potential role of various stakeholders was variously discussed – both in the individual working groups and plenary sessions. It was reported that the public sector had acquired some thousand mills which would subsequently be sold with 50% subsidy. It was also reported that foreign rice grower associations are currently present in Lagos. These two anecdotes provide food for thought about the potential role of the various stakeholders. It also underlined the need for the various stakeholders to take on a proactive role, and reduce their dependency, particularly on government.

The potential role of government received particular attention. It was acknowledged that the role of government should limit itself to being a facilitator/promoter. It should create an enabling environment for an efficient development of the private sector in general and the rice subsector in particular. The role of government should focus on governance, be transparent and should not benefit any particular group. Government should stay out of production and processing activities. A dialogue with government about its proper role should be initiated. For instance, what can we expect in terms of infrastructure development, critical to reduce transaction costs within the rice subsector. The need for political will, commitment, consistency and continuity in both policy making *and* policy implementation were also underlined - including the need to make the necessary resources available. Within an enabling environment, the private sector should then take the drivers' seat in developing the rice subsector.

The stakeholder forum was variously endorsed. It was clarified though that its success depends on a clear statement of purpose and role. It was proposed that the forum should have a coordinating role – it should meet periodically to take stock, find out what needs to be done and make recommendations for adjustments as needed. However, such coordination could prove to be ambitious in the short term. For a start, the forum should enhance transparency and accountability of the various institutions. For instance, it could help to assess the outcome of government intervention in the rice subsector. For the forum to be successful, there is a need for training to enhance the capacity of the diverse stakeholders to participate.

#### **4 In conclusion**

The workshop was successful in the sense that it achieved all envisaged outputs. The workshop provided a productive and good venue for continued dialogue amongst a broad selection of stakeholders in the Nigerian rice economy.

The various stakeholders appreciated the progress made towards the formulation of a strategic framework to revitalize the Nigerian rice sector. Indeed, numerous useful propositions were aired during the workshop and taken to heart by the organizers. However, the workshop participants also acknowledged the challenges ahead. Further steps are needed to operationalise the strategic framework and translate it into a specific and detailed action plan. The workshop was just one important step on the way forward. The workshop also highlighted the need for stakeholder participation and dialogue. Indeed, participants clearly expressed the need for continued dialogue and information sharing amongst stakeholders. Therefore, although the organizers and subsequent discussions helped to develop a strategic framework, the subsequent action plan needs an increased and active input from all stakeholders involved to be viable. The work should indeed not stop here – instead, it has just begun.

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## **Annex 2 Workshop program**

### **Wednesday 20 August**

8:00	9:15	Inscription participants
9:15	10:00	Opening ceremony (incl address IITA, USAID, NISER, WARDA)
10:00	10:30	Presentation of the project and workshop (objectives, participants, program)
<i>10:30</i>	<i>10:45</i>	<i>Coffee &amp; photo</i>
10:45	11:15	Rice policy and development (review)
11:15	12:45	Rice production (survey)
12:45	13:30	Irrigated rice (study)
<i>13:30</i>	<i>14:30</i>	<i>Lunch</i>
14:30	15:15	Rice processing (survey)
15:15	15:35	Rice consumption (survey)
15:35	16:00	Rice markets and price signals (study)
<i>16:00</i>	<i>16:20</i>	<i>Coffee</i>
16:20	17:50	General discussion - rice sector constraints in Nigeria
17:50	18:20	Towards a strategic plan (presentation draft document)
18:20	18:30	Wrap up
<i>18:30</i>	<i>19:30</i>	<i>Coctail</i>

### **Thursday 21 August**

8:15	8:30	Introduction to working groups (TOR, participants)
8:30	10:00	Breakup in working groups and discussion strategic plan
<i>10:00</i>	<i>10:30</i>	<i>Coffee</i>
10:30	11:15	Restitution of working groups
11:15	12:15	General discussion
12:15	12:30	Closing ceremony
<i>12:30</i>	<i>13:30</i>	<i>Lunch &amp; departure</i>

### **Annex 3 List of documents distributed to the participants**

Akande, S.O. and G. Akpokodje, 2003. Rice Prices And Market Integration In Selected Areas In Nigeria. Ibadan: NISER.

Akpokodje, G, Lançon, and O, Erenstein, 2001. Nigeria's rice economy: State of the art. Paper presented at the NISER/WARDA Nigerian Rice Economy Stakeholders Workshop, Ibadan, 8-9 November 2001. Bouake: WARDA.

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Lançon, F., O. Erenstein, S.O. Akande, S.O. Titilola, G. Akpokodje and O.O. Ogundele, 2003b. Imported Rice retailing and Purchasing in Nigeria: A survey. Abidjan: WARDA.

WARDA, 2003. Strategy for rice sector revitalization in Nigeria. Draft for discussion at Technical workshop, 20-21 August 2003, IITA, Ibadan. Abidjan: WARDA.